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Chen

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(54) **INFLATABLE LAMP**

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(51) **Int. Cl.**

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F21V 23/00	(2015.01)
F21S 4/20	(2016.01)
F21V 21/096	(2006.01)
F21V 21/08	(2006.01)

(52) **U.S. Cl.**
CPC ***F21V 3/026*** (2013.01); ***F21S 4/20*** (2016.01); ***F21S 9/037*** (2013.01); ***F21V 3/023*** (2013.01); ***F21V 23/008*** (2013.01); *F21V 21/08* (2013.01); *F21V 21/096* (2013.01)

(58) **Field of Classification Search**
CPC F21V 3/026; F21V 3/023; F21V 23/008; F21V 31/00; F21V 31/005; F21V 21/096; F21V 21/08; F21V 21/088; F21S 4/20; F21S 9/037
USPC 362/157, 158, 192, 396, 398
See application file for complete search history.

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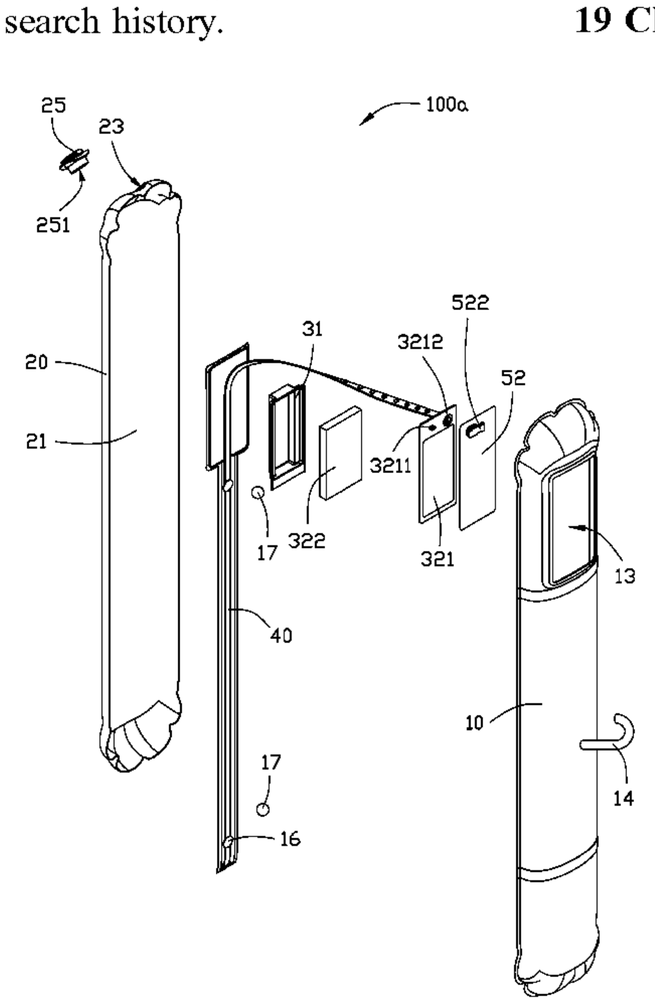
Primary Examiner — Laura K Tso

(57) **ABSTRACT**

Provided is an inflatable lamp, which includes a first flexible housing, a second flexible housing connected with the first flexible housing to cooperatively form a receiving cavity, a power supply assembly arranged on the first flexible housing, a light strip received in the receiving cavity, and a sealing assembly. The power supply assembly has a mounting element arranged on the first flexible housing and a power supply received in the mounting element. One end of the light strip is arranged on the mounting element and electrically connected with the power supply. The sealing assembly includes a first sealing element sealingly connected with an inner side of the first flexible housing. The first sealing element is configured to airtightly seal and cover the light strip, the mounting element, and the power supply. The inflatable lamp of the present disclosure is easy to carry and store.

19 Claims, 14 Drawing Sheets



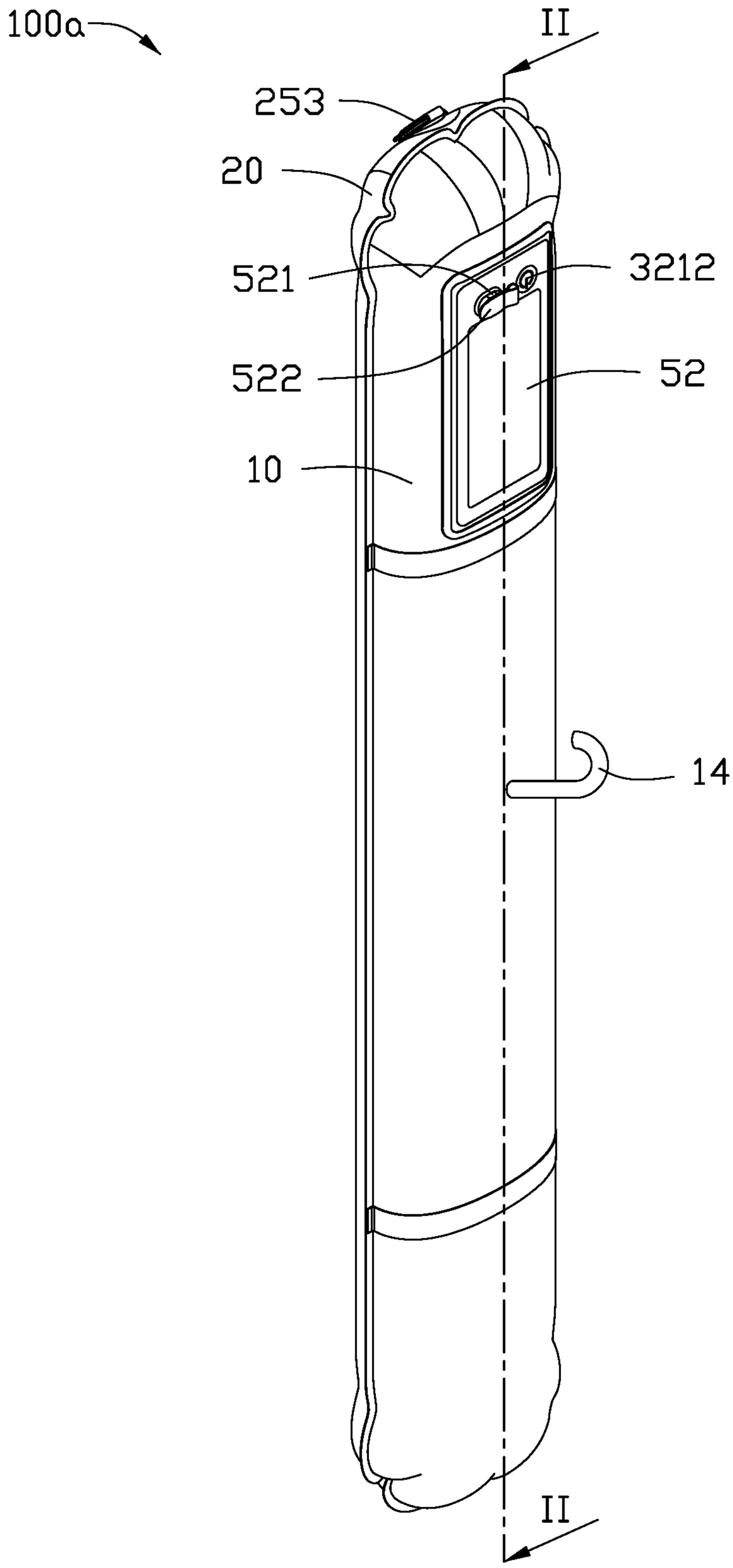


FIG. 1

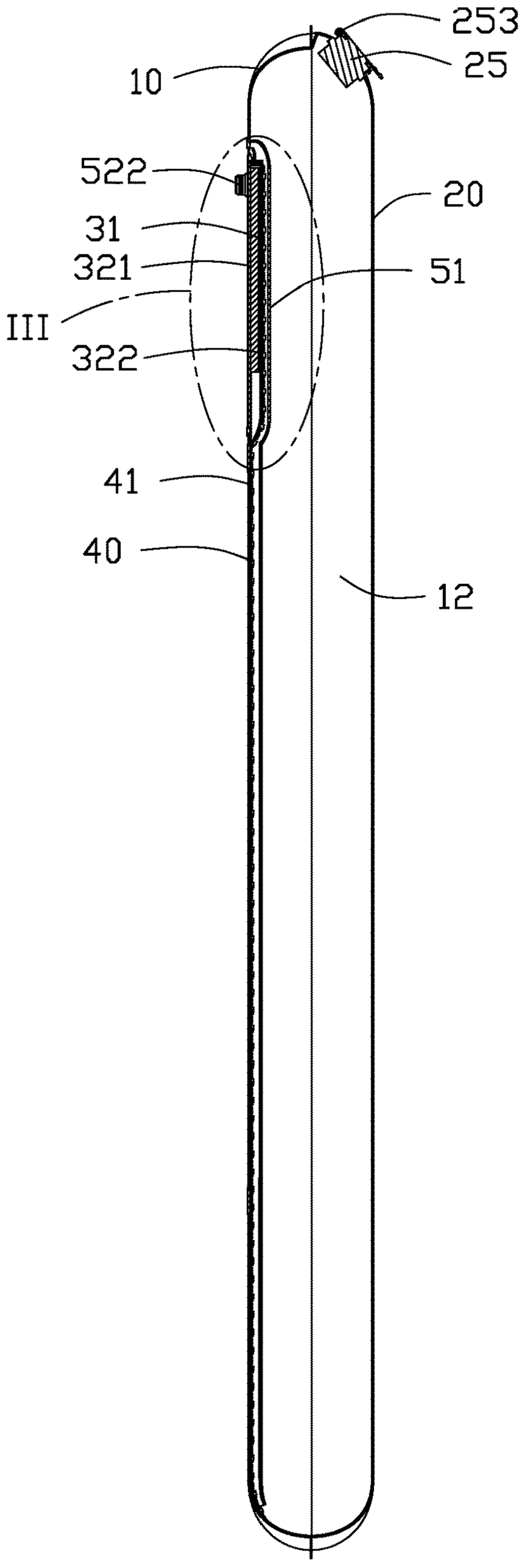


FIG. 2

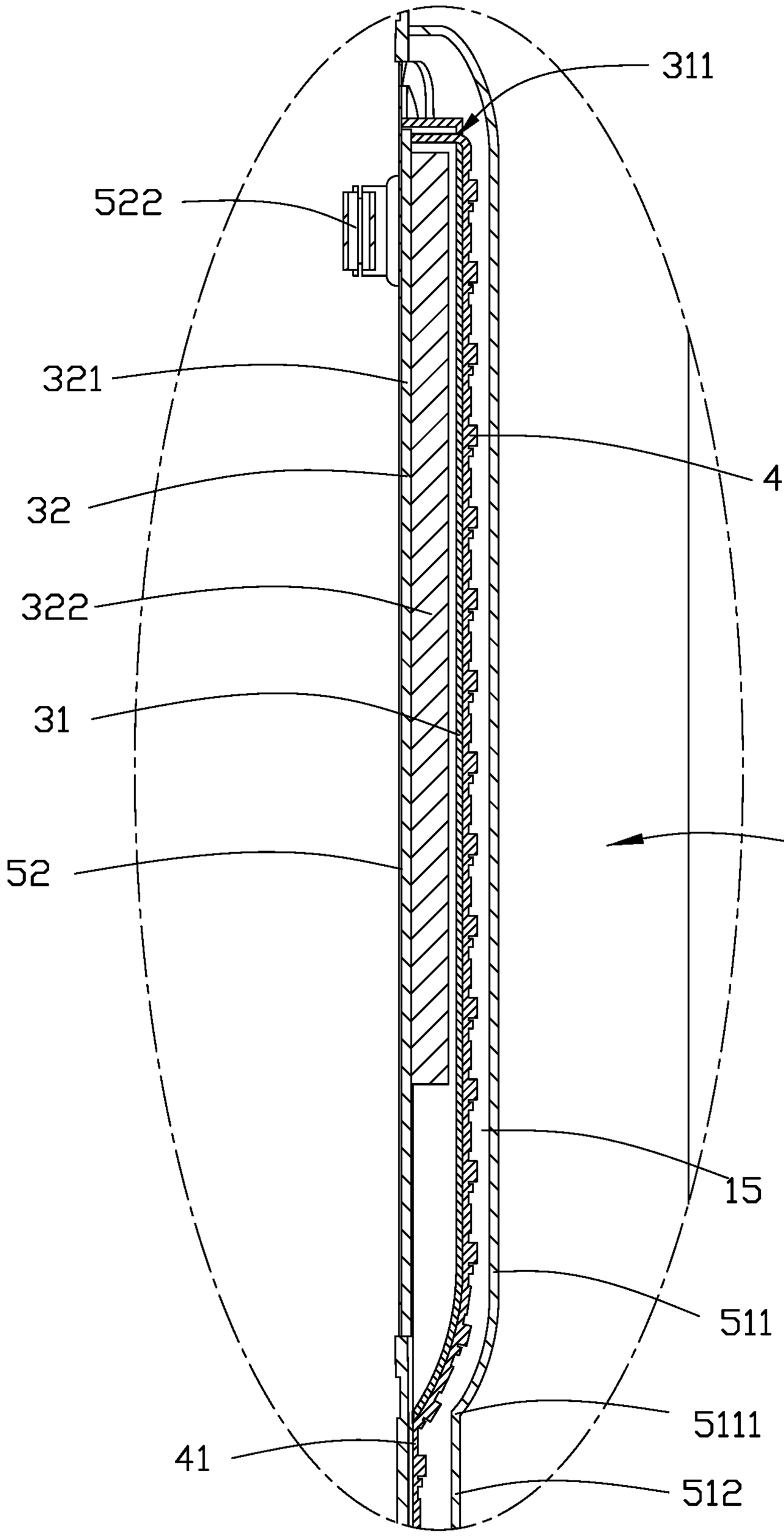


FIG. 3

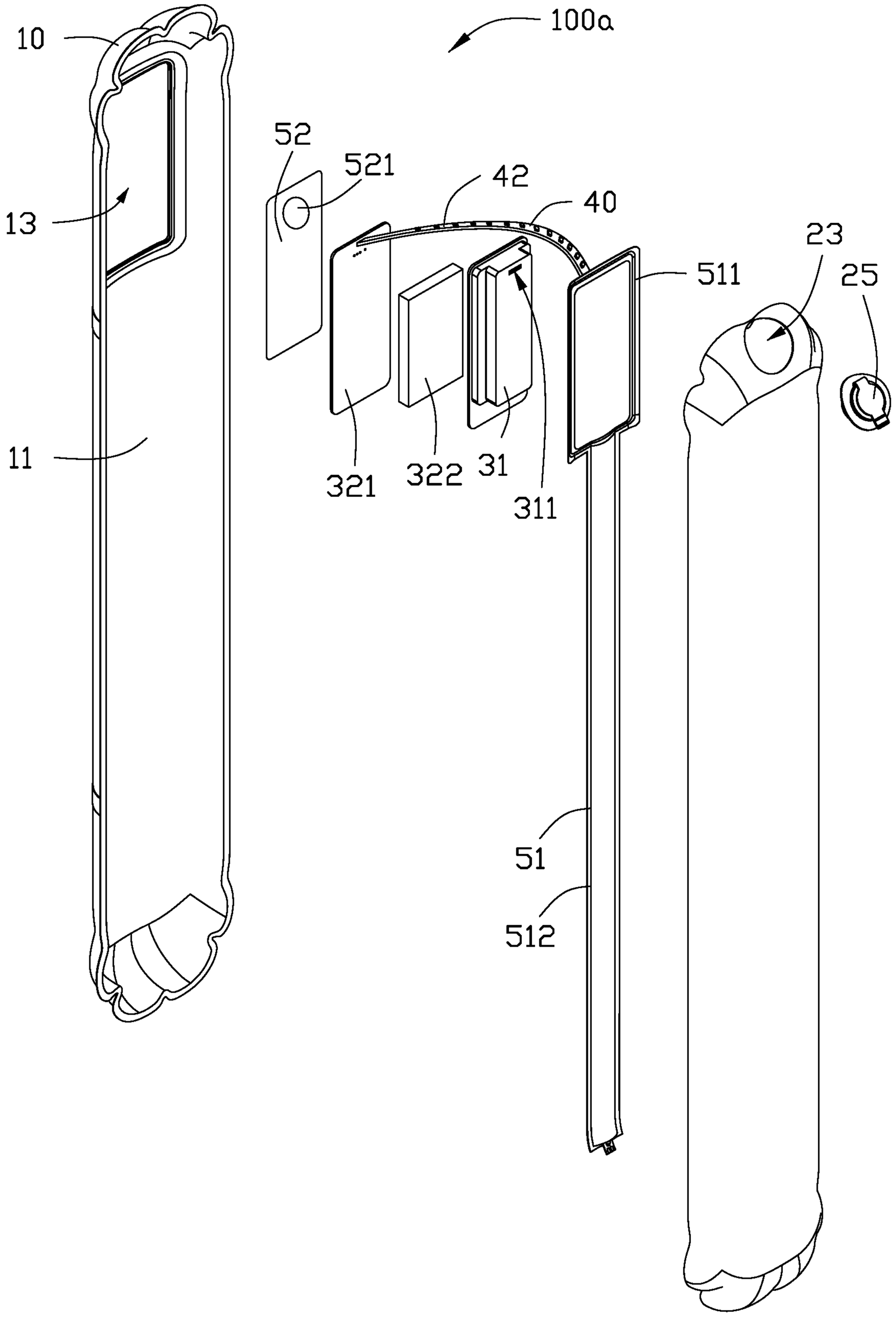


FIG. 4

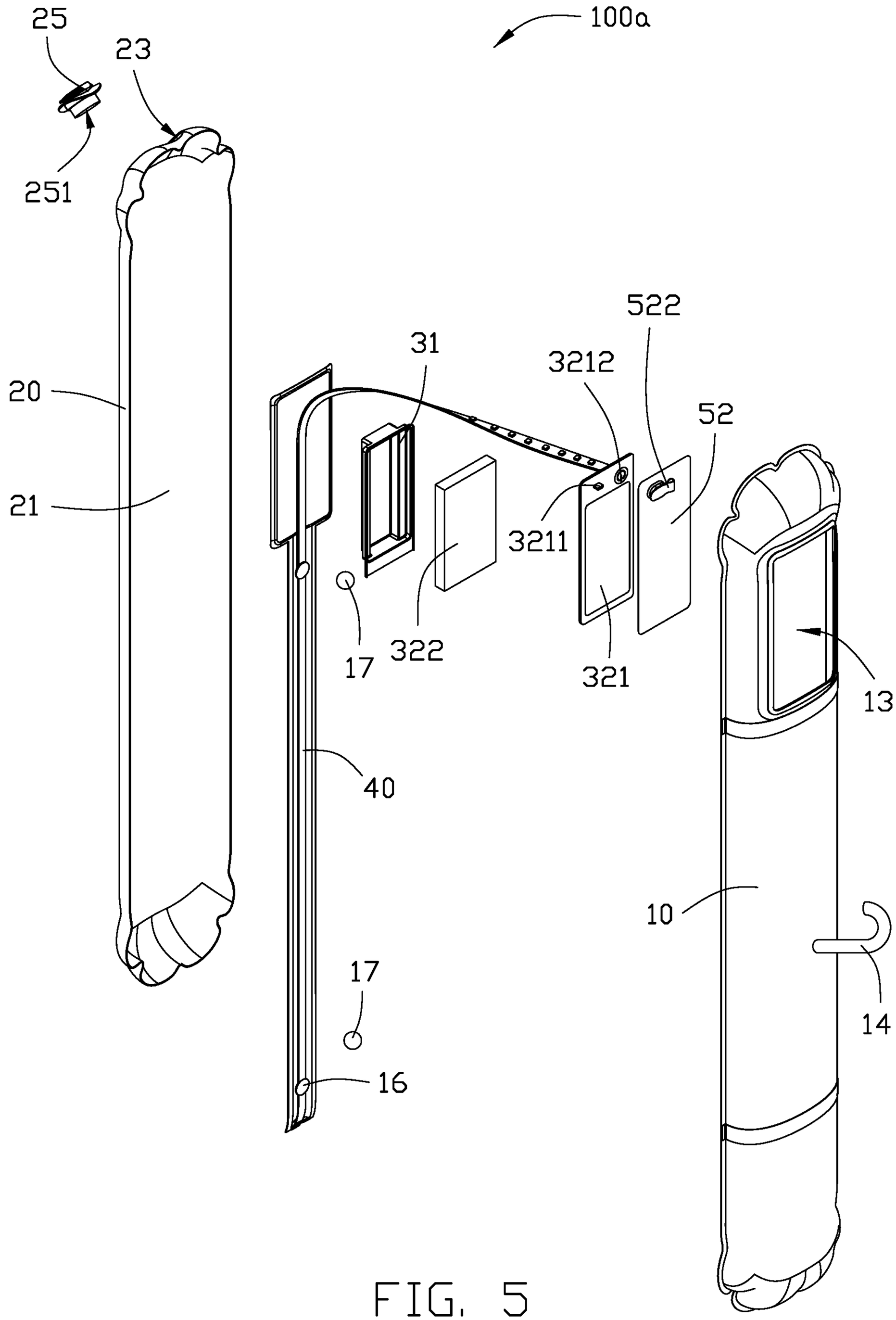

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FIG. 5

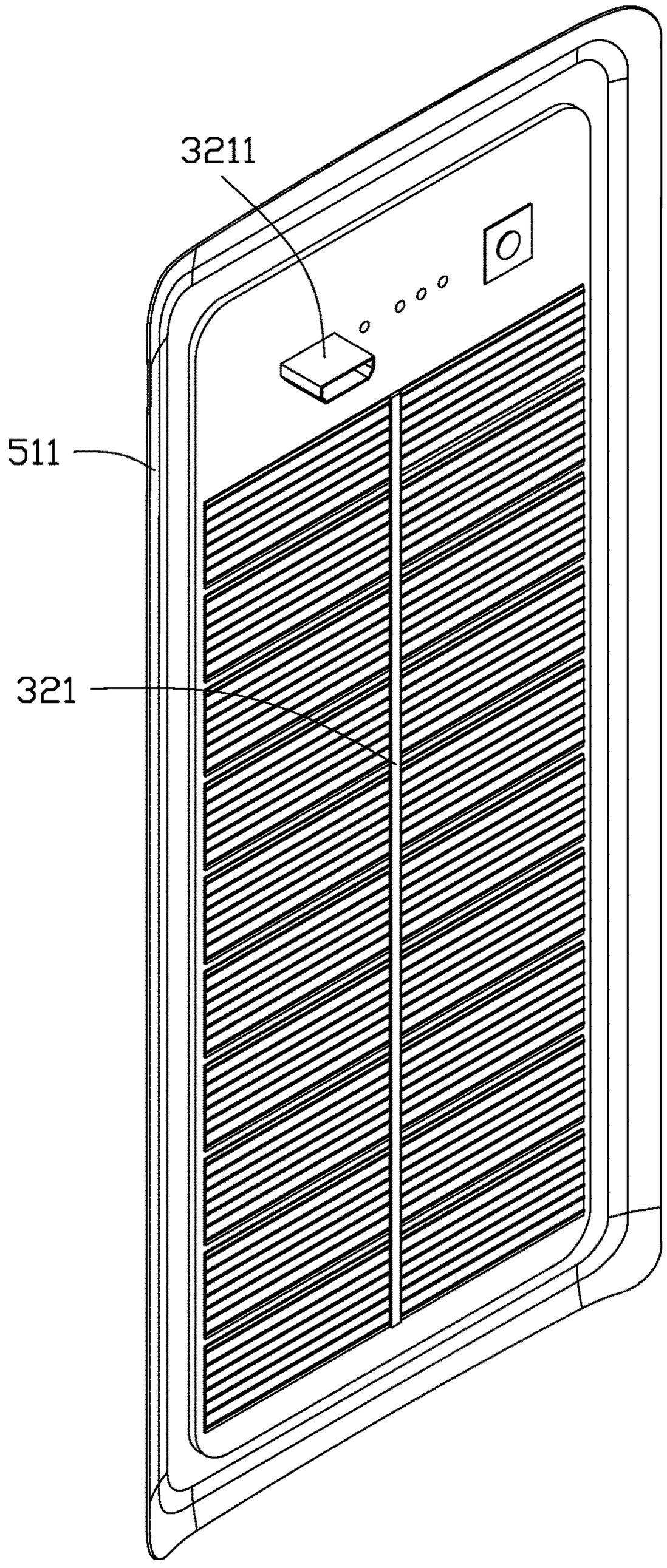

FIG. 6

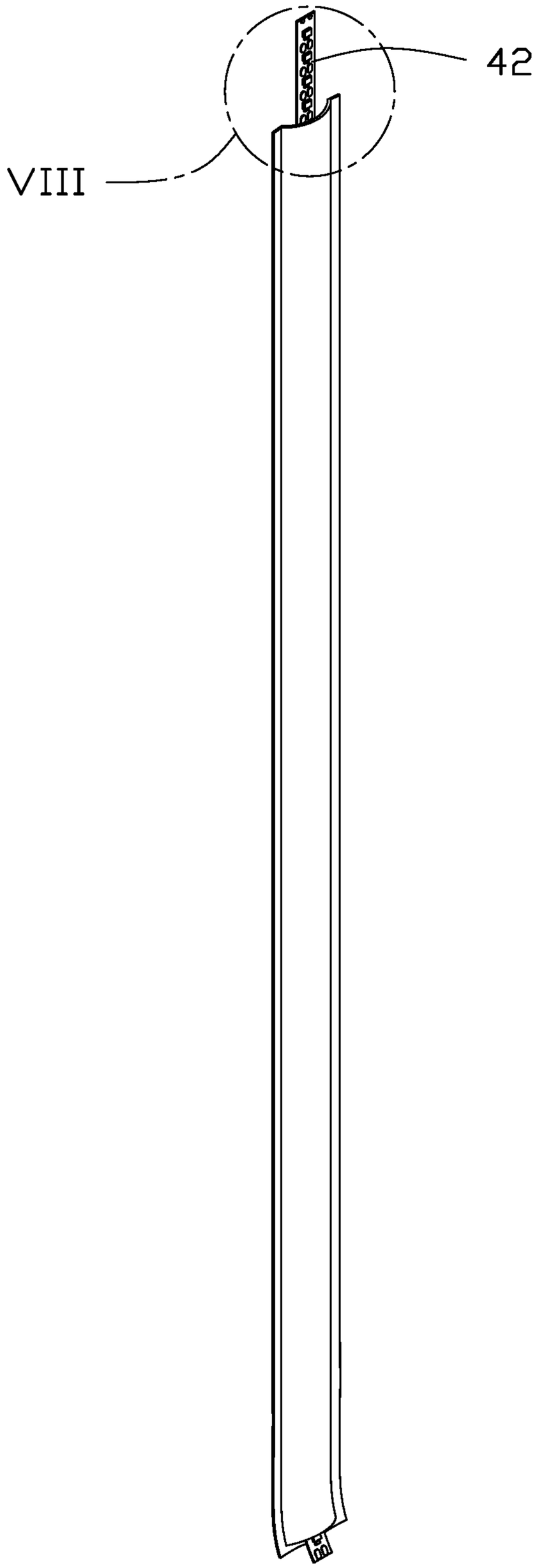

FIG. 7

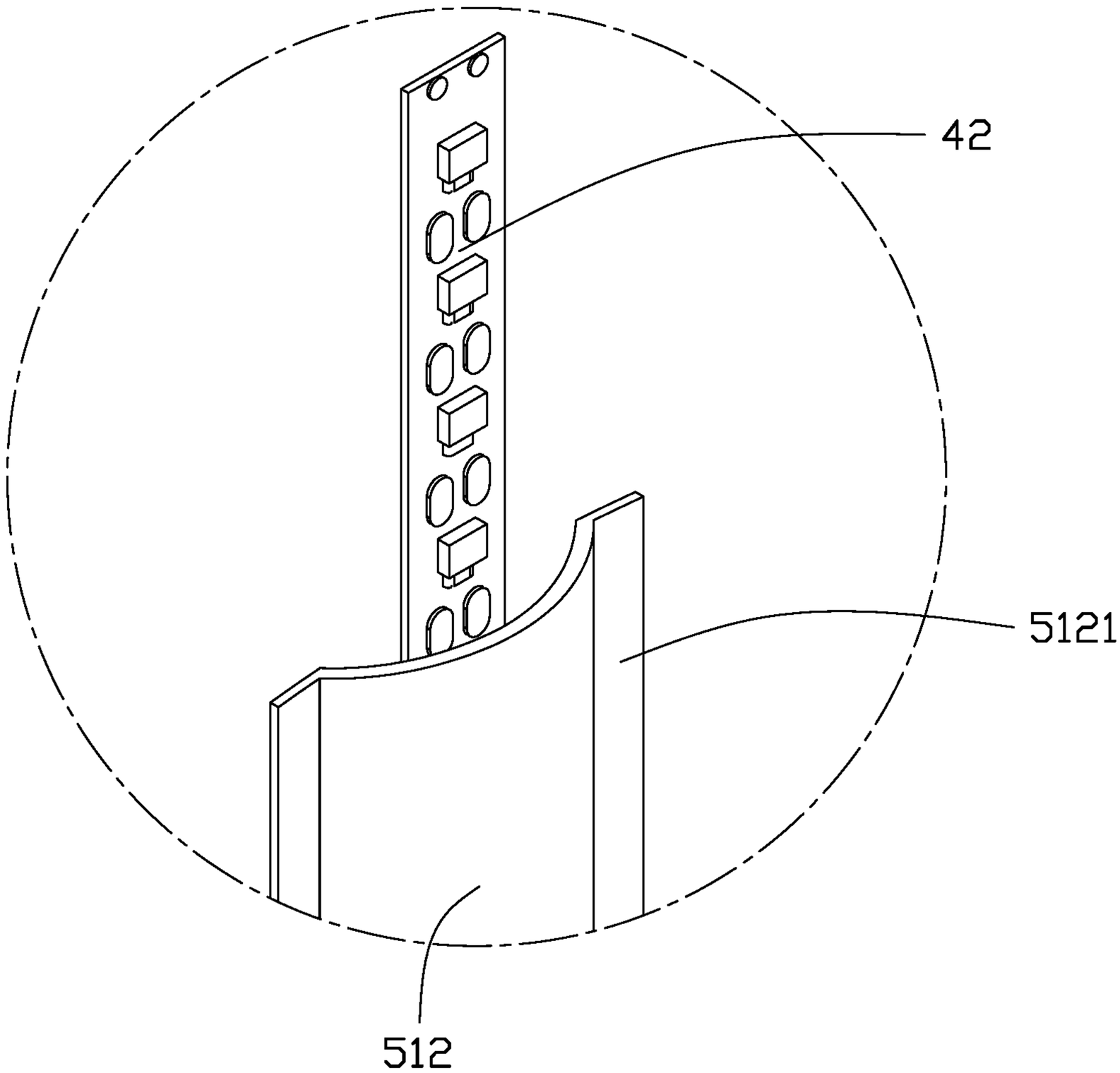

FIG. 8

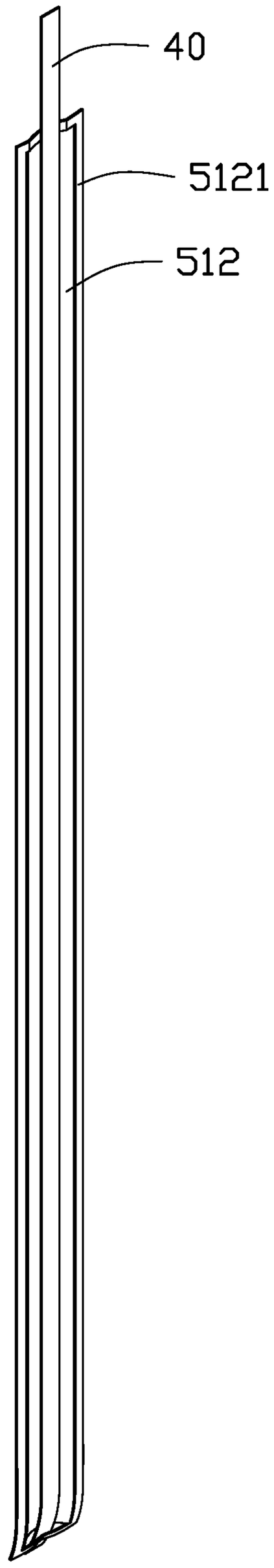

FIG. 9

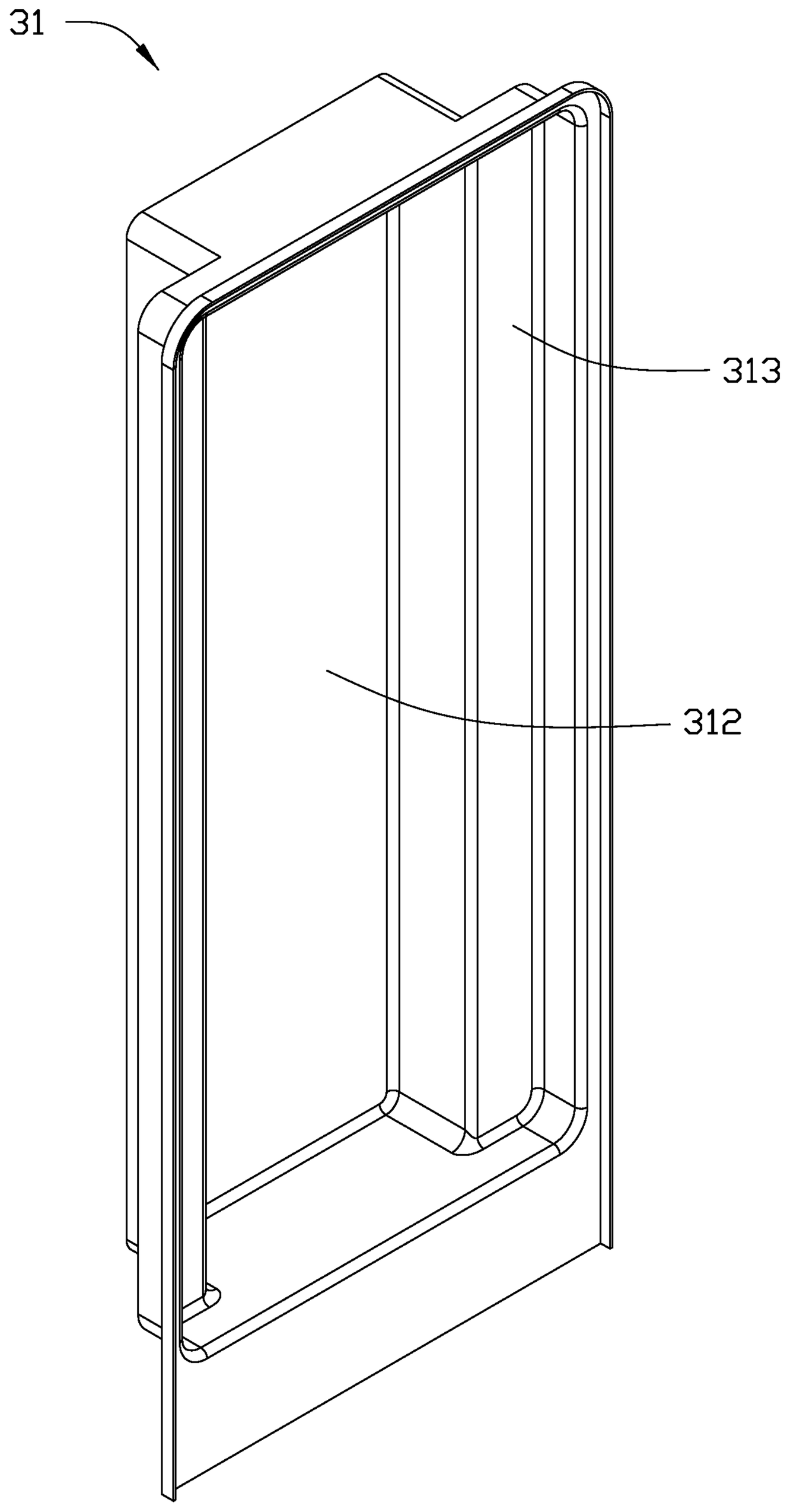

FIG. 10

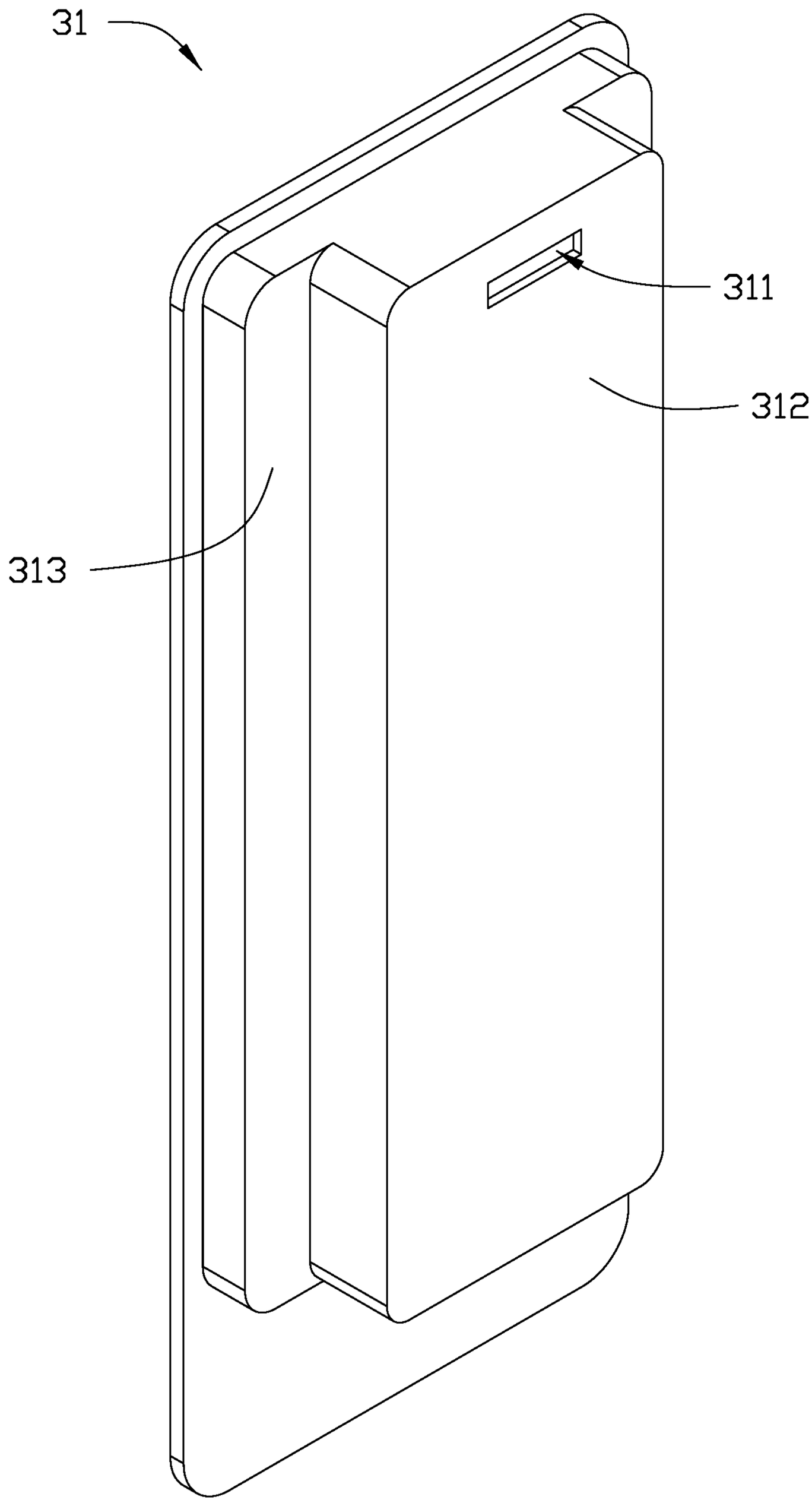

FIG. 11

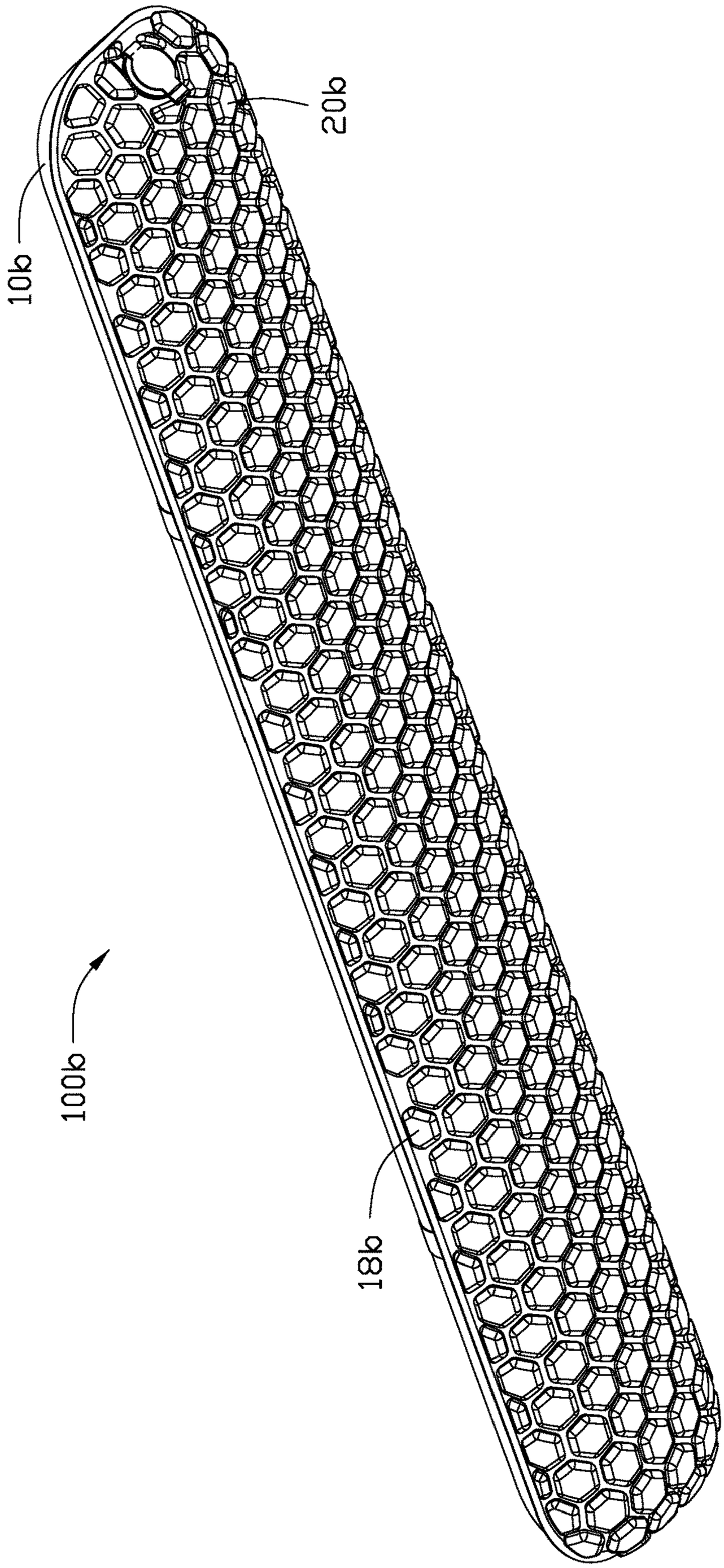

FIG. 12

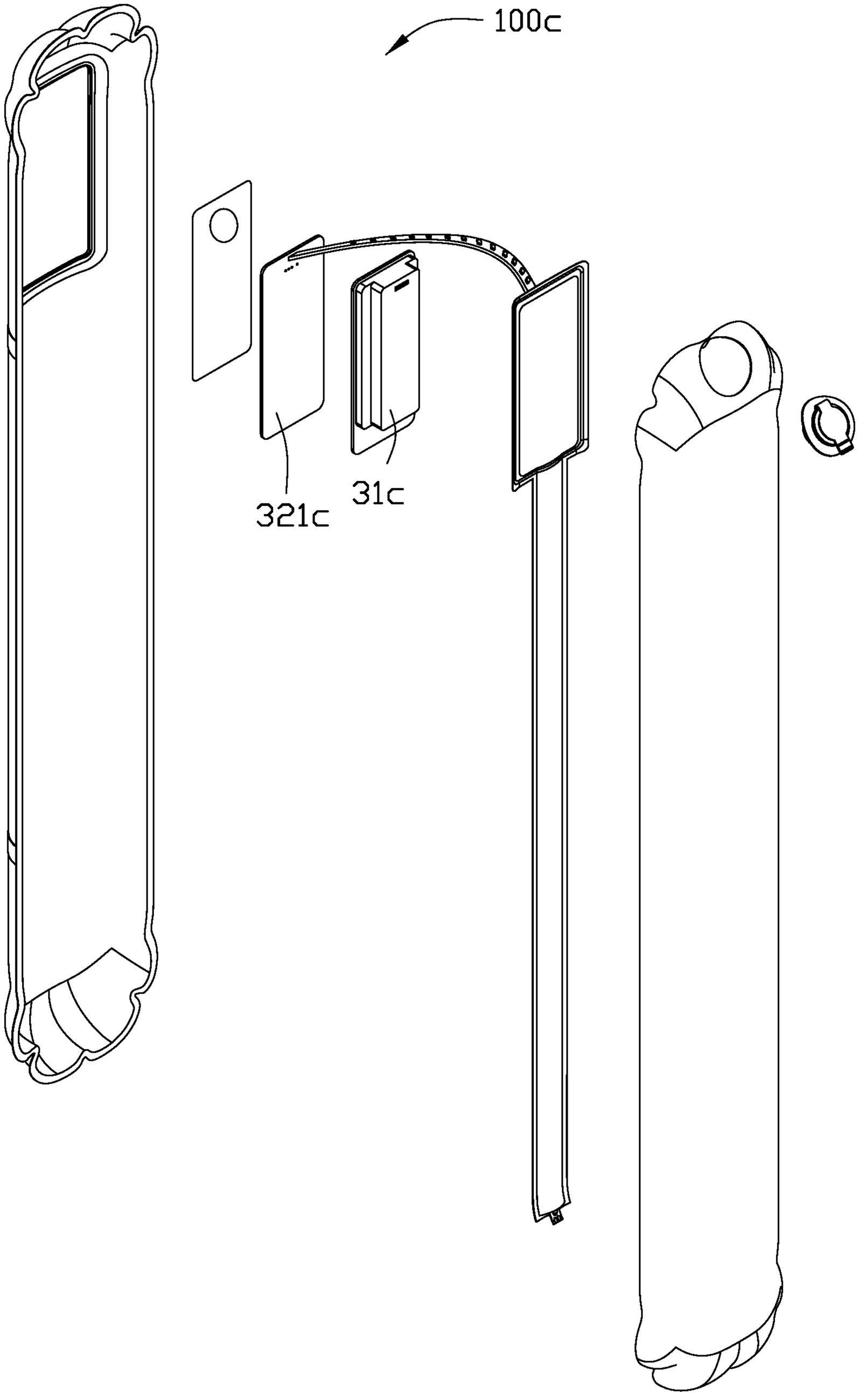

FIG. 13

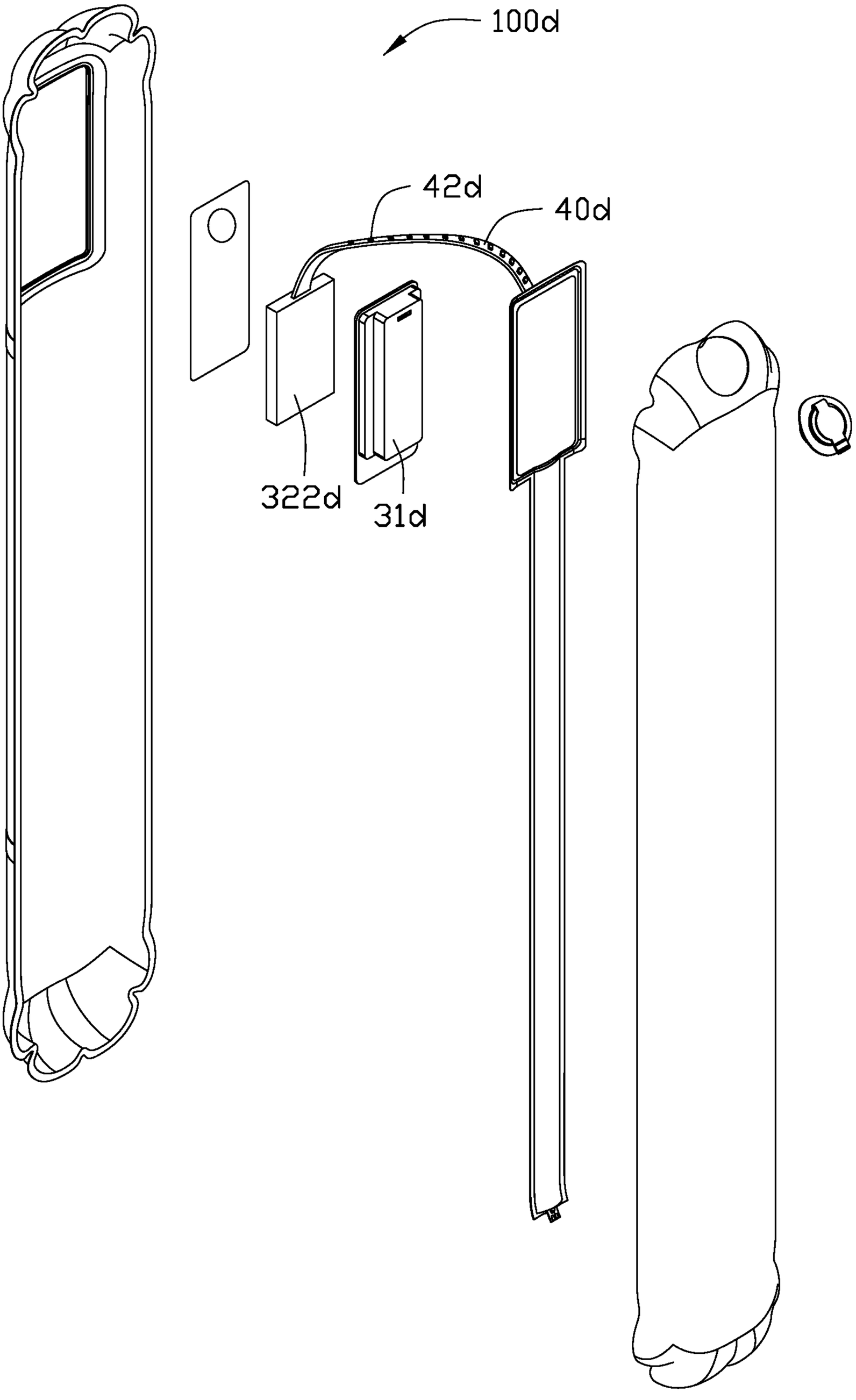

FIG. 14

INFLATABLE LAMP

FIELD OF THE DISCLOSURE

The present disclosure relates to the field of lamps, and in particular to an inflatable lamp.

BACKGROUND OF THE DISCLOSURE

There are various lamps currently on the market, but these lamps are not suitable for outdoor activities. Some lamps cannot be folded for store and carry; some lamps are too small in size, resulting in a poor light diffusion and a small illumination area; some lamps are not waterproof and cannot float on the water surface. Further, the existing inflatable lamps are designed to have a certain small size for carry, and the LED light sources in the existing inflatable lamps are rigid lamp panels. In order to expand the illumination area, the rigid lamp panels should be enlarged, which may cause the the inflatable lamps are not convenient to carry.

SUMMARY OF THE DISCLOSURE

In view of the foregoing disadvantages inherent in the existing art, the general purpose of the present disclosure is to provide an inflatable lamp, to include all advantages of the existing art, and to overcome the drawbacks inherent in the existing art.

An object of the present disclosure is to provide an inflatable lamp. The inflatable lamp includes: a first flexible housing, a second flexible housing connected with the first flexible housing to cooperatively form a receiving cavity, a power supply assembly arranged on the first flexible housing, a light strip received in the receiving cavity, and a sealing assembly. The power supply assembly includes: a mounting element arranged on the first flexible housing, and a power supply, received in the mounting element. One end of the light strip is arranged on the mounting element and electrically connected with the power supply. The first sealing element is sealingly connected with an inner side of the first flexible housing, and configured to airtightly seal and cover the light strip, the mounting element, and the power supply.

In at least one embodiment, the first sealing element includes: a first sealing part configured to airtightly seal the mounting element and the power supply between the inner side of the first flexible housing and the first sealing part, and a second sealing part connected with the first sealing part, the second sealing part is configured to airtightly seal the light strip between the inner side of the first flexible housing and the second sealing part.

In at least one embodiment, the power supply includes a solar panel; or the power supply includes a solar panel and a battery, the solar panel and the battery are both received in the mounting element.

In at least one embodiment, the end of the light strip is arranged on a surface of the mounting element opposite to the solar panel and electrically connected with the solar panel, the mounting element is at least partially transparent.

In at least one embodiment, the light strip includes: a body and a connecting end connected with the body, the connecting end of the light strip is arranged on the surface of the mounting element opposite to the solar panel and electrically connected with the solar panel.

In at least one embodiment, the first flexible housing defines a mounting hole, the mounting element is arranged on a portion of the first flexible housing corresponded to the

mounting hole, and received in the receiving cavity. The sealing assembly further includes a second sealing element, facing the first sealing element, the second sealing element is sealingly connected with the first flexible housing, and configured to airtightly seal and cover the mounting element and the power supply.

In at least one embodiment, the mounting element defines a receiving groove configured to receive the solar panel, or to receive the solar panel and the battery.

In at least one embodiment, the receiving groove includes: a first receiving groove configured to receive the battery, and a second receiving groove communicated with the first receiving groove and configured to receive the solar panel, the second receiving groove is formed by recessing two opposite side walls of the first receiving groove in the opposite directions.

In at least one embodiment, the power supply includes a battery, the end of the light strip is mounted on a surface of the mounting element opposite to the battery and electrically connected with the battery, and the mounting element is at least partially transparent.

In at least one embodiment, the mounting element defines a receiving groove, configured to receive the battery.

In at least one embodiment, the inflatable lamp further includes at least one magnetic mounting component, the at least one magnetic mounting component is mounted on the inner side of the first flexible housing or an inner side of the second flexible housing.

In at least one embodiment, the inflatable lamp further includes at least one coating film, the at least one coating film is configured to seal the at least one magnetic mounting component on the inner side of the first flexible housing or an inner side of the second flexible housing.

In at least one embodiment, at least a portion of the light strip is attached on an inner side of the first flexible housing, and a light-emitting surface of the light strip is configured to face towards the second flexible housing.

In at least one embodiment, the inflatable lamp further includes at least one hanger, the at least one hanger is arranged on an outer surface of the first flexible housing or an outer surface of the second flexible housing.

In at least one embodiment, the inflatable lamp further includes at least one light guiding element, the at least one light guiding element is arranged on an outer surface of the first flexible housing or an outer surface of the second flexible housing.

In at least one embodiment, the light guiding element is flexible; or the light guide portion has a circle shape, a polygon shape, or an irregular shape.

In at least one embodiment, the first flexible housing defines at least one vent hole, the inflatable lamp further includes at least one sealing plug, configured to open or airtightly seal the through hole.

In at least one embodiment, the second flexible housing defines at least one vent hole, the inflatable lamp further includes at least one sealing plug, configured to open or airtightly seal the through hole.

In at least one embodiment, the inflatable lamp in a deflated state has a length of 60 cm to 100 cm, and a width of 5 cm to 15 cm.

In at least one embodiment, the inflatable lamp in an inflated state has a length of 60 cm to 100 cm, and a diameter of 7 cm to 17 cm.

In the technical solution of the present disclosure, the inflatable lamp includes a first flexible housing, a second flexible housing, a power supply assembly, a light strip, and a sealing assembly. The second flexible housing is sealed

with the first flexible housing to cooperatively form a receiving cavity. The power supply assembly is arranged on the first flexible housing. The power supply assembly includes a mounting element and a power supply, the mounting element is arranged on the first flexible housing, and the power supply is received in the mounting element. The light strip is received in the receiving cavity, one end of the light strip is arranged on the mounting element and electrically connected with the power supply. The sealing assembly includes a first sealing element sealingly connected with an inner side of the first flexible housing, the first sealing element is configured to cover and seal the power supply assembly and the light strip. Both the power supply assembly and the light strip are received in the receiving cavity, and the first sealing member is configured to airtightly seal and cover the power supply assembly and the light strip. In this way, the light strip, the mounting member, and the power supply member are protected from being damaged, and the air in the receiving cavity may also be prevented from leaking. When in use, the air is filled into the receiving cavity to inflate the inflatable lamp. In an inflated state, the inflatable lamp may float on the water surface and emit light on the water surface; the light emitted by lamp beads of the light strip may be refracted and/or reflected in the receiving cavity, as such the inflatable lamp may generate a light which is soft, transparent, mellow, and uniform, to get a better lighting effect. Since the first flexible housing, the second flexible housing, and the light strip are all flexible, the inflatable lamp may be folded or rolled for carry or store. User may adjust an inflating volume as needed to comfortably wear or use the inflatable light. In addition, the power supply of the power supply assembly is electrically connected to the light strip to provide electricity for the light strip, so that the inflatable lamp does not need an external power supply, which is convenient for use.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to more clearly illustrate the embodiments of the present disclosure or the technical solutions in the related art, the drawings to be used in the embodiments or description of the related art will be briefly described below. Obviously, the drawings in the following description are only certain embodiments of the present disclosure, and other drawings may be obtained according to the structures shown in the drawings without any creative work for a person having ordinary skill in the art.

FIG. **1** is a structural schematic view of an inflatable lamp according to a first embodiment of the present disclosure;

FIG. **2** is a cross-sectional view of the inflatable lamp of FIG. **1** along II-II line;

FIG. **3** is an enlarged view of a portion III in FIG. **2**;

FIG. **4** is an exploded view of the inflatable lamp of FIG. **1**;

FIG. **5** is similar to FIG. **4**, but shown from another view;

FIG. **6** is a structural schematic view of parts of a power supply assembly of the inflatable lamp of MG **1**;

FIG. **7** is a structural schematic view of a light strip and a second sealing part of the inflatable lamp of FIG. **1**;

FIG. **8** is an enlarged view of a portion VIII in FIG. **7**;

FIG. **9** is similar to FIG. **7**, but shown from another view;

FIG. **10** is a structural schematic view of a mounting element of the inflatable lamp of FIG. **1**;

FIG. **11** is similar to FIG. **10**, but shown from another view;

FIG. **12** is a structural schematic view of an inflatable lamp according to a second embodiment of the present disclosure;

FIG. **13** is a structural schematic view of an inflatable lamp according to a thud embodiment of the present disclosure; and

FIG. **14** is a structural schematic view of an inflatable lamp according to a fourth embodiment of the present disclosure.

DETAILED DESCRIPTION OF THE DISCLOSURE

The exemplary embodiments described herein detail for illustrative purposes are subject to many variations in implementation. The present disclosure provides a valve core assembly. It should be emphasized, however, that the present disclosure is not limited only to what is disclosed and extends to cover various alternation to valve core assembly. It is understood that various omissions and substitutions of equivalents are contemplated as circumstances may suggest or render expedient, but these are intended to cover the application or implementation without departing from the spirit or scope of the present disclosure.

It should be noted that all directional indications (such as up, down, left, right, front, rear, . . .) in the embodiments of the present disclosure are only used to explain the relative position relationship; the movement, etc. between the components in a specific posture (as shown in the attached drawings). If the specific posture is changed, the directional indication will be changed accordingly.

In addition, the descriptions of "first", "second", etc., in this application are used for descriptive purposes only, and are not to be construed as indicating or implying their relative importance or implicitly indicating the number of technical features indicated. Thus, features defining "first" or "second" may include at least one of the features, either explicitly or implicitly. In addition, the technical solutions between the various embodiments of the present disclosure may be combined with each other, but must be based on the realization of a person having ordinary skill in the art, when the combination of technical solutions is contradictory or unrealizable, it shall be deemed that such combination of technical solutions does not exist and is not within the scope of this application.

Referring to FIGS. **1** to **11**, the present disclosure provides an inflatable lamp **100***a* according to a first embodiment.

The inflatable lamp **100***s* includes: a first flexible housing **10**, a second flexible housing **20**, a power assembly **30** arranged on the first flexible housing **10**, a lamp strip **40**, and a sealing assembly **50**. The second flexible housing **20** is connected with the first flexible housing **10** to cooperatively form a receiving cavity **12**. The power supply **30** includes a mounting element **31** arranged on the first flexible housing **10**, and a power supply **32** mounted in the mounting element **31**. The lamp strip **40** is received in the receiving cavity **12**. One end of the lamp strip **40** is arranged on the mounting element **31** and electrically connected with the power supply **32**. The sealing assembly **50** includes a first sealing element **51** sealingly connected with an inner side of the first flexible housing **10**, the first sealing element **51** is configured to airtightly seal and cover the lamp strip **40**, the mounting element **31**, and the power supply **32**.

In at least one embodiment, the first flexible housing **10** is sealed with the second flexible housing **20**. In detail, a peripheral of the first flexible housing **10** is sealed with a peripheral of the second flexible housing **20**.

In at least one embodiment, the light strip **40** is a LED flexible light strip, and the flexible light strip **40** may be bent or even curled.

It should be understood that the first flexible housing **10**, the second flexible housing **20**, and the light strip **40** may all be bent, and the inflatable lamp **100***a* in a deflated state may be rolled up for store or carry.

In at least one embodiment, the light strip **40** includes a plurality of lamp beads (not labeled) connected in series, and the lamp beads may emit white light or color light. The lamp beads may be LED chips.

It should be understood that the inflatable lamp **100***a*, may be installed on tents, carriages, etc., and the inflatable lamp **100***a* may also be fixed to surfaces of other objects (such as, backpacks, sunshades, clothes, or inflatable toys, etc.). Since the inflatable lamp **100***a* may be rolled up, the inflatable lamp **100***a* may still fit well on the uneven surfaces of the objects.

In at least one embodiment, the first flexible housing **10** has a first cavity **11**, and the second flexible housing **20** has a second cavity **21**. After the first flexible housing **10** are sealed with the second flexible housing **20**, the first cavity **11** and the second cavity **21** cooperatively form the receiving cavity **12**.

In at least one embodiment, the first flexible housing **10** and the second flexible housing **20** are matched in shape, and the peripheral of the first flexible housing **10** is sealed with the peripheral of the second flexible housing **20**. So that, the inflatable lamp **100***a* is waterproof.

In at least one embodiment, the first flexible housing **10** and/or the second flexible housing **20** has a sucking cup, hook and loop fasteners, a buckle structure (including a buckle head and a buckle seat), or a hook, etc. The inflatable lamp **100***a* may be worn on the human body, attached to the surface of the object, or hung on the object.

In at least one embodiment, the first flexible housing **10** and the second flexible housing **20** are both made of transparent or translucent materials, such as thermoplastic polyurethane (TPU), polyvinyl chloride (PVC), and so on. The first flexible housing **10** may be sealed with the second flexible housing **20** by heat pressing, hot electric pressing, or welding.

In at least one embodiment, peripheries of the power supply assembly **30**, the first flexible housing **10**, and the second flexible housing **20** are all coated with sealant, so as to obtain a sealed receiving cavity **12**.

In at least one embodiment, the first sealing element **51** is made of transparent or translucent materials, such as thermoplastic polyurethane (TPU), polyvinyl chloride (PVC), and so on. The first sealing member **51** is configured to protect the light strip **40**, the mounting element **31**, and the power supply element **32** from damage, and to separate the receiving cavity **12** from the light strip **40**, the mounting element **31**, and the power supply element **32**, so as to prevent an air leakage.

In at least one embodiment, since masses of the first flexible housing **10**, the second flexible housing **20**, the power supply assembly **30**, the light strip **40**, and the sealing assembly **50** are all small, the inflatable lamp **100***a* is easy to carry.

The first flexible housing **10**, the second flexible housing **20**, and the light strip **40** are all elongated, lengths and widths of first flexible housing **10**, the second flexible housing **20**, and the light strip **40** may be adjusted according to actual needs to obtain a larger illumination area.

In at least one embodiment, the inflatable lamp **100***a* in the deflated state has a length of 60 cm to 100 cm, and a width of 5 cm to 15 cm; the inflatable lamp **100***a* in the inflated state has a length of 60 cm to 100 cm, and a diameter of 7 cm to 17 cm.

In at least one embodiment, the power supply element **32** includes a solar panel **321** and a battery **322**, and the solar panel **321** and the battery **322** are received in the mounting element **31**. Electrical energy generated by the solar panel **321** may be stored in the battery **322**.

In at least one embodiment, the mounting element **31** is made of rigid plastic.

In the technical solution of the present disclosure, the inflatable lamp **100***a* includes a first flexible housing **10**, a second flexible housing **20**, a power supply assembly **30**, a light strip **40**, and a sealing assembly **50**. The second flexible housing **20** is connected with the first flexible housing **10** to form the receiving cavity **12**. The power supply assembly **30** is arranged on the first flexible housing **10**. The power supply assembly **30** includes a mounting element **31** and a power supply **32**, the mounting element **31** is arranged on the first flexible housing **10**, and the power supply **32** is received in the mounting element **31**. The light strip **40** is received in the receiving cavity **12**, and the end of the light strip **40** is arranged on the mounting element **31** and electrically connected with the power supply **32**, The sealing assembly **50** includes a first sealing element **51** sealingly connected to an inner side of the first flexible housing **10**, and the first sealing element **51** is configured to airtightly seal and cover the light strip **40**, the mounting member **31**, and the power supply member **32**. Both the power supply assembly **30** and the light strip **40** are received in the receiving cavity **12**, and the first sealing member **51** is configured to airtightly seal and cover the power supply assembly **30** and the light strip **40**. In this way, the light strip **40**, the mounting member **31**, and the power supply member **32** are protected from being damaged, and the air in the receiving cavity **12** may also be prevented from leaking.

When in use, the air is filled into the receiving cavity **12** to inflate the inflatable lamp **100***a*. In an inflated state, the inflatable lamp **100***a* may float on the water surface and emit light on the water surface; the light emitted by the lamp beads of the light strip **40** may be refracted and/or reflected in the receiving cavity **12**, as such the inflatable lamp **100***a* may generate a light which is soft, transparent, mellow, and uniform, to get a better lighting effect. Since the first flexible housing **10**, the second flexible housing **20**, and the light strip **40** are all flexible, the inflatable lamp **100***a* may be folded or rolled for carry or store. User may adjust the inflating volume as needed to comfortably wear or use the inflatable light **100***a*. In addition, the power supply **32** of the power supply assembly **30** is electrically connected to the light strip **40** to provide electricity for the light strip **40**, so that the inflatable lamp **100***a* does not need an external power supply, which is convenient for use.

The first sealing element **51** includes a first sealing part **511** and a second sealing part **512** connected to the first sealing part **511**. The first sealing part **511** is configured to airtightly seal the mounting element **31** and the power supply **32** between the inner side of the first flexible housing **10** and the first sealing part **511**, the second sealing part **512** is configured to airtightly seal the light strip **40** between the inner side of the first flexible housing **10** and the second sealing part **512**.

In at least one embodiment, the second sealing part **512** is matched with the mounting element **31** in shape.

In at least one embodiment, the second sealing part **512** is matched with the light strip **40** in shape.

In at least one embodiment, the first sealing part **511** sealed with the second sealing part **512**.

In the technical solution of the present disclosure, the first sealing part **511** is configured to airtightly seal the mounting element **31** and the power supply **32** between the inner side of the first flexible housing **10** and the first sealing part **511**, the second sealing part **512** is configured to airtightly seal the light strip **40** between the inner side of the first flexible housing **10** and the second sealing part **512**. In this way, the first sealing part **511** and the second sealing part **512** can not only protect the light strip **40**, the mounting element **31**, and the power supply **32** from being damaged, but also prevent the air in the receiving cavity **12** from leaking out.

One end of the light strip **40** is disposed on a surface of the mounting member **31** opposite to the solar panel **321**, and electrically connected with the solar panel **321**. The mounting element **31** is at least partially transparent.

In at least one embodiment, one end of the mounting element **31** defines a notch **311**, and the solar panel **321** is exposed from the notch **311**. The end of the light strip **40** is arranged on the surface of the mounting member **31** opposite to the solar panel **321**, and electrically connected to the solar panel **321** through the notch **311**.

In at least one embodiment, the end of the light strip **40** is arranged on the surface of the mounting element **31** opposite to the solar panel **321**, and bent and extended along one end of the mounting element **31**, to electrically connect to the solar panel **321**.

In at least one embodiment, the light strip **40** is adhered to the surface of the mounting element **31** opposite away the solar power panel **321** by an adhesive.

In the technical solution of the present disclosure, the end of the light strip **40** is disposed on the surface of the mounting member **31** opposite to the solar panel **321**, and electrically connected with the solar panel **321**, and the mounting element **31** is at least partially transparent. So that, the illumination area of the inflatable lamp **100***a* is expanded.

The light strip **40** includes a body **41** and a connecting end **42** connected with the body **41**. The connecting end **42** of the light strip **40** is arranged on the surface of the mounting element **31** opposite to the solar panel **321** and electrically connected with the solar panel **321**.

In at least one embodiment, the connecting end **42** is arranged on the surface of the mounting element **31** opposite to the solar panel **321**, and electrically connected with the solar panel **321** through the notch **311**.

In at least one embodiment, the connecting end **42** is arranged on the surface of the mounting element **31** opposite to the solar panel **321**, and extended and bent along an end of the mounting element **31**, until the connecting end **42** is connected with the solar panel **321**.

In at least one embodiment, the body **41** and the connecting end **42** both include a plurality of light beads.

The first flexible housing **10** has a mounting hole **13**, the mounting element **31** is arranged on a portion of the first flexible housing **10** corresponding to the mounting hole **13**, and received in the receiving cavity **12**. The sealing assembly **50** further includes a second sealing element **52** facing the first sealing element **51**. The second sealing element **52** is configured to sealingly connect with the first flexible housing **10**, and airtightly seal and cover the mounting element **31** and the power supply **32**.

In at least one embodiment, the second sealing element **52** is made of transparent or translucent materials, such as thermoplastic polyurethane (TRU), polyvinyl chloride (PVC), and so on.

In at least one embodiment, a peripheral of the second sealing element **52** is sealingly connected with a peripheral of the first sealing element **51**.

In at least one embodiment, after the first sealing part **511** is sealed with the second sealing part **512**, the mounting element **31** and the power supply **32** may be arranged on the first sealing part **511**, the light strip **40** may be arranged on the second sealing part **512**, and the second sealing element **52** may be placed on the inner side of the first flexible housing **10**. Then the first sealing element **51** and the second sealing element **52** are subjected to a sealing process such as heat pressing, hot electric pressing, or welding. In this way, the peripheral of the first sealing element **51** is sealed with the peripheral of the second sealing element **52**, and the second sealing element **52** is sealed with a peripheral of the mounting hole **13**.

In at least one embodiment, after the first sealing part **511** is sealed with the second sealing part **512**, the mounting element **31** and the power supply **32** may be arranged on the first sealing part **511**, the light strip **40** may be arranged on the second sealing part **512**, and the second sealing element **52** may be placed on an outer side of the first flexible housing **10**. Then the first sealing element **51** and the second sealing element **52** are subjected to the sealing process. In this way, the peripheral of the first sealing element **51** is sealed with the inner side of the first flexible housing **10**, and the peripheral of the second sealing element **52** is sealed with the outer side of the first flexible housing **10**.

In at least one embodiment, when the first sealing element **51** is sealed with the second sealing element **52**, a connecting area **5111** of the first sealing part **511** and the second sealing part **512** is not subjected to the sealing process, so as to prevent the light strip **40** in the connecting area **5111** from being damaged.

In at least one embodiment, when the second sealing part **512** is sealed with the second sealing part **512**, a connecting edge **5121** is formed on the inner side of the first flexible housing **10**.

In at least one embodiment, the first sealing element **51**, the second sealing element **52**, and the inner side of the first flexible housing **10** cooperatively form an accommodating cavity **15**, and the mounting element **31**, the power supply **32**, and the light strip **40** are accommodated in the accommodating cavity **15**.

In at least one embodiment, the first sealing part **511** and/or the second sealing part **512** defines at least one through hole, the through hole is configured to communicate the accommodating cavity **15** with the receiving cavity **12**.

In at least one embodiment, at least a part of a light receiving surface of the solar panel **321** is exposed from the mounting hole **13**, so that the solar panel **321** can absorb light.

In at least one embodiment, the second sealing element **52** is received in the mounting hole **13** or covers the mounting hole **13**, to airtightly seal and cover the power supply **32** and the mounting element **31**.

The mounting element **31** has a receiving groove, and both the solar panel **321** and the battery **322** are received in the receiving groove.

In at least one embodiment, the mounting element **31** defines a first receiving groove **312**, and the battery **322** is received in the first receiving groove **312**. The mounting element **31** further defines a second receiving groove **313** communicated with the first receiving groove **312**, The second receiving groove **313** is formed by recessing two opposite side walls of the first receiving groove **312** in the

opposite directions. The solar panel **321** is received in the second receiving groove **313**.

In at least one embodiment, the first sealing part **511** defines a first accommodating groove **5112** and a second accommodating groove **5113** communicated with the first accommodating groove **5112**. The second accommodating groove **5113** is formed by recessing two opposite side walls of the first accommodating groove **5112** in opposite directions. Walls of the first receiving groove **312** are accommodated in the first accommodating groove **5112**, and walls of the second receiving groove **313** re accommodated in the second accommodating groove **5113**.

In at least one embodiment, a surface of the mounting element **31** away from the first sealing element **51** defines the first receiving groove **312** and the second receiving groove **313**.

The inflatable lamp **100***a* further includes at least one magnetic mounting component **16** mounted on the inner side of the first flexible housing **10** or the inner side of the second flexible housing **20**.

In at least one embodiment, the inflatable lamp **100***a* further includes at least one magnetic mounting component **16** and at least one coating film **17** configured to seal the at least one magnetic mounting component **16**. The at least one coating film **17** is configured to seal the at least one magnetic mounting component **16** on the inner side of the first flexible housing **10** or the inner side of the second flexible housing **20**. The at least one magnetic mounting component **16** may absorb a metal piece (not shown), for fixing the inflatable lamp **100***a* on the metal piece.

Preferably, the at least one magnetic mounting component **16** includes at least two magnetic mounting components **16**, the at least two magnetic mounting components **16** are arranged at intervals along an extension direction of the light strip **40** and between the light strip **40** and the first flexible housing **10**.

Referring to FIGS. **2** to **3**, at least a portion of the light strip **40** is attached on an inner side of the first flexible housing **10**, and a light-emitting surface of the light strip **40** is configured to face towards the second flexible housing **20**.

It should be understood that the second flexible housing **20** is made of transparent or translucent materials, such as TPU or PVC. So that, the light from the light strip **40** may be emitted from the second flexible housing **20**.

Referring to FIGS. **1** to **5**, the first flexible housing **10** and/or the second flexible housing **20** defines at least one vent hole **23**, the inflatable lamp **100***a* further includes at least one sealing plug **25** configured to open or airtightly seal the through hole **23**.

In at least one embodiment, the sealing plug **25** has a through hole **251** configured for charging and discharging air.

In at least one embodiment, the sealing plug **25** also includes a cover **253** rotatably connected with a periphery of the through hole **251**, to seal the receiving cavity **12**.

In at least one embodiment, the sealing plug **25** is a press-type air tap configured to prevent the air in the receiving cavity **12** from leakage.

In the technical solution of the present disclosure, the first flexible housing **10** and/or the second flexible housing **20** defines at least one vent hole **23**. The inflatable lamp **100***a* further includes at least one sealing plug **25** configured to open or airtightly seal the through hole **23**, to charge and discharge air.

Referring to FIGS. **1** and **5**, an outer surface of the first flexible housing **10** or an outer surface of the second flexible housing **20** includes at least one hanger **14**.

In at least one embodiment, the outer surface of the first flexible housing **10** or the outer surface of the second flexible housing **20** includes a plurality of hangers **14**.

In at least one embodiment, both ends of the first flexible housing **10** or both ends of the second flexible housing **20** include the hangers **14**.

In the technical solution of the present disclosure, the outer surface of the first flexible housing **10** or the outer surface of the second flexible housing **20** includes at least one hanger **14**, so as to hang the inflatable lamp **100***a*, on a fixed object.

The solar panel **321** includes a USB interface **3211**, the second sealing element **52** includes an opening **521**, the USB interface **3211** is exposed from the opening **521**, and the USB interface **3211** is sealingly connected with a hole wall of the opening **521**.

In at least one embodiment, the second sealing element **52** further includes a sealing plug **522**, the sealing plug **522** is configured to expose or cover the USB interface **3211**.

It should be understood that the USB interface **3211** may be connected with an external power supply, to supply power to the light strip **40**. Meanwhile, the solar panel **321** may also be configured to charge terminal devices such as mobile phones through the USB interface **3211**.

In at least one embodiment, the solar panel **321** further includes a switch **3212**, and the switch **3212** is configured to turn on or turn off the light strip **40**.

In at least one embodiment, the solar panel **321** further includes a control circuit (not shown), the control circuit may be wirelessly connected with a mobile terminal through Bluetooth and support a remote control of the mobile terminal. The control circuit board may also be configured to change light modes of the light strip **40**.

In at least one embodiment, the solar panel **321** further includes a sound player (not shown) such as a speaker, After the control circuit is connected with a remote terminal through Bluetooth, the sound player may play sound or music.

In at least one embodiment, the light strip **40** may be turned on or turned off by pressing or touching the switch **3212**. The light emitting color of the light strip **40** may also be changed by pressing or touching the switch **32121**.

Referring to FIG. **12**, the present disclosure provides an inflatable lamp **100***b* according to a second embodiment. The inflatable lamp **100***b* of the second embodiment is similar in structure to the inflatable lamp **100***a* of the first embodiment, and the difference between the inflatable lamp **100***b* of the second embodiment and the inflatable lamp **100***a* of the first embodiment includes: an outer surface of the first flexible housing **10***b* and/or an outer surface of the second flexible housing **20***b* includes at least one light guiding element **18***b* configured to guide light. The light guiding elements **18***b* with different structures may be applied on the outer surface of the first flexible housing **10***b* and/or the outer surface of the second flexible housing **20***b* according to the scenarios, to condense or diffuse the light, so as to narrow or expand the illumination area.

In at least one embodiment, the light guiding element **18***b* is flexible.

In at least one embodiment, the light guiding element **18***b* is pre-filled with air.

In at least one embodiment, each light guiding element **18***b* defines a vent hole (not shown), the vent holes of the light guiding elements **18***b* are communicated with the receiving cavity cooperatively defined by the first flexible housing **10***b* and the second flexible housing **20***b*. When the

air is filled into the receiving cavity, the light guide element **18***b* is also filled with air to achieve a light guide effect.

In at least one embodiment, the light guide portion **18***b* has a circle shape, a polygon shape, or an irregular shape, etc.

In at least one embodiment, the outer surface of the first flexible housing **10***b* and/or the outer surface of the second flexible housing **20***b* include a plurality of light guiding elements **18***b*. The light guiding elements **18***b* are arranged at intervals on the outer surface of the first flexible housing **10***b* and/or the outer surface of the second flexible housing **20***b*.

In the technical solutions of the present disclosure, the outer surface of the first flexible housing **10***b* and/or the outer surface of the second flexible housing **20***b* include at least one light guiding element **18***b*. The at least one light guiding element **18***b* is configured to condense or diffuse light, to narrow or expand the illumination area.

Referring to FIG. **13**, the present disclosure provides an inflatable lamp **100***c* according to a third embodiment. The inflatable lamp **100***c* of the third embodiment is similar in structure to the inflatable lamp **100***a* of the first embodiment, and the difference between the inflatable lamp **100***c* of the third embodiment and the inflatable lamp **100***a* of the first embodiment includes: the power supply includes solar panel **321***c* received in a mounting element **31***c*.

Referring to FIG. **14**, the present disclosure provides an inflatable lamp **100***d* according to a fourth embodiment. The inflatable lamp **100***d* of the fourth embodiment is similar in structure to the inflatable lamp **100***a* of the first embodiment, and the differences between the inflatable lamp **100***d* of the fourth embodiment and the inflatable lamp **100***a* of the first embodiment include: the power supply is battery **322***d*, one end of the light strip **40***d* is arranged on a surface of a mounting element **31***d* opposite to the battery **322***d*, and electrically connected to the battery **322***d*.

In at least one embodiment, the battery **322***d* is a rechargeable battery.

In at least one embodiment, the mounting element **31***d* is at least partially transparent.

In at least one embodiment, the light strip **40***d* includes a connecting end **42***d*, the connecting end **42***d* is arranged on the surface of the mounting element **31***d* opposite to the battery **322***d*, and electrically connected to the battery **322***d*.

The foregoing descriptions of specific embodiments of the present disclosure have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the present disclosure to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. The embodiments were chosen and described in order to best explain the principles of the present disclosure and its practical application, and to thereby enable others skilled in the art to best utilize the present disclosure and various embodiments with various modifications as are suited to the particular use contemplated. It is understood that, various omissions and substitutions of equivalents are contemplated as circumstances may suggest or render expedient, but such omissions and substitutions are intended to cover the application or implementation without departing from the spirit or scope of the present disclosure.

What is claimed is:

1. An inflatable lamp, comprising:

a first flexible housing;

a second flexible housing, connected with the first flexible housing to cooperatively form a receiving cavity;

a power supply assembly, arranged on the first flexible housing, the power supply assembly comprises:

a mounting element, arranged on the first flexible housing; and

a power supply, received in the mounting element;

a light strip, received in the receiving cavity, one end of the light strip is arranged on the mounting element and electrically connected with the power supply, at least a portion of the light strip is attached on an inner side of the first flexible housing, and a light-emitting surface of the light strip is configured to face towards the second flexible housing; and

a sealing assembly, comprising;

a first sealing element, sealingly connected with an inner side of the first flexible housing, the first sealing element is configured to airtightly seal and cover the light strip, the mounting element, and the power supply.

2. The inflatable lamp of claim **1**, wherein the first sealing element comprises:

a first sealing part, configured to airtightly seal the mounting element and the power supply between the inner side of the first flexible housing and the first sealing part; and

a second sealing part, connected with the first sealing part, the second sealing part is configured to airtightly seal the light strip between the inner side of the first flexible housing and the second sealing part.

3. The inflatable lamp of claim **1**, wherein the power supply comprises a solar panel; or the power supply comprises a solar panel and a battery, the solar panel and the battery are both received in the mounting element.

4. The inflatable lamp of claim **3**, wherein the end of the light strip is arranged on a surface of the mounting element opposite to the solar panel and electrically connected with the solar panel, the mounting element is at least partially transparent.

5. The inflatable lamp of claim **4**, wherein the light strip comprises:

a body; and

a connecting end, connected with the body, the connecting end of the light strip is arranged on the surface of the mounting element opposite to the solar panel and electrically connected with the solar panel.

6. The inflatable lamp of claim **3**, wherein

the first flexible housing defines:

a mounting hole, the mounting element is arranged on a portion of the first flexible housing corresponded to the mounting hole, and received in the receiving cavity;

the sealing assembly further comprises:

a second sealing element, facing the first sealing element, the second sealing element is sealingly connected with the first flexible housing, and configured to airtightly seal and cover the mounting element and the power supply.

7. The inflatable lamp of claim **3**, wherein the mounting element defines:

a receiving groove, configured to receive the solar panel, or to receive the solar panel and the battery.

8. The inflatable lamp of claim **7**, wherein the receiving groove comprises:

a first receiving groove, configured to receive the battery; and

a second receiving groove, communicated with the first receiving groove and configured to receive the solar

panel, the second receiving groove is formed by recessing two opposite side walls of the first receiving groove in the opposite directions.

9. The inflatable lamp of claim **1**, wherein the power supply comprises a battery, the end of the light strip is mounted on a surface of the mounting element opposite to the battery and electrically connected with the battery, and the mounting element is at least partially transparent.

10. The inflatable lamp of claim **9**, wherein the mounting element defines:

a receiving groove, configured to receive the battery.

11. The inflatable lamp of claim **1**, wherein further comprising:

at least one magnetic mounting component, mounted on the inner side of the first flexible housing or an inner side of the second flexible housing.

12. The inflatable lamp of claim **11**, further comprising:

at least one coating film, configured to seal the at least one magnetic mounting component on the inner side of the first flexible housing or an inner side of the second flexible housing.

13. The inflatable lamp of claim **1**, wherein further comprising:

at least one hanger, arranged on an outer surface of the first flexible housing or an outer surface of the second flexible housing.

14. The inflatable lamp of claim **1**, wherein further comprising:

at least one light guiding element, arranged on an outer surface of the first flexible housing or an outer surface of the second flexible housing.

15. The inflatable lamp of claim **14**, wherein the light guiding element is flexible.

16. The inflatable lamp of claim **1**, wherein

the first flexible housing defines:

at least one vent hole;

the inflatable lamp further comprises:

at least one sealing plug, configured to open or air-tightly seal the through hole.

17. The inflatable lamp of claim **1**, wherein

the second flexible housing defines:

at least one vent hole;

the inflatable lamp further comprises:

at least one sealing plug, configured to open or air-tightly seal the through hole.

18. The inflatable lamp of claim **1**, wherein the inflatable lamp in a deflated state has a length of 60 cm to 100 cm, and a width of 5 cm to 15 cm.

19. The inflatable lamp of claim **1**, wherein the inflatable lamp in an inflated state has a length of 60 cm to 100 cm, and a diameter of 7 cm to 17 cm.

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